

REMARKS

Claims 1, 5-7, 10-12 and 15 were rejected under 35 USC §102(b) as being anticipated by Dunn. Reconsideration and withdrawal of these rejections are respectfully requested.

This reference teaches a workpiece support for clamping work pieces for machining. It does not teach or disclose a tool having a tool surface made up of an array of tool elements, as claimed herein. The present claim 1 recites:

1. A tooling system which comprises a plurality of rectangular tool elements arranged in an array to form perpendicular rows and columns of tool elements to define a tool surface, ..., wherein the tooling system further comprises at least one bolster means provided to hold the elements of the array securely in the closed ~~position and position~~, each bolster means having ~~an~~ a plurality of element contacting ~~face~~ faces, each element contacting face being configured which is adapted selectively to apply localized pressure to one or more tool elements of the array to adjust an orientation of the tool elements, aligning edges of the tool elements, so as to correct any inter-row or inter-array misalignment, and causing vertices of four adjacent elements to touch one another in the closed position, so that the tool elements of the array tessellate.

The claimed embodiment calls for the tooling system to include a plurality of rectangular tool elements (note the cylindrical workpieces of Dunn) arranged in an array to form perpendicular rows and columns (note the non-perpendicular arrangements of the workpieces in Dunn, created by the circular form of the workpieces and by the arcuate nature of the workpiece retaining frame assemblies in Dunn) to define a tool surface. Moreover, the claimed bolster means are recited to include a plurality of element contacting faces, each of which being configured to apply localized pressure to one or more tool elements in the array, which is a feature not taught by Dunn. The claimed element contacting faces, moreover, are claimed to be configured to adjust the orientation of the tool elements ... so that the tool elements of the array tessellate. A tessellation, as the Examiner will recall, refers to a tiling of a plane by a collection of objects that fills the plane with no overlaps and no gaps. Kindly see the application drawings for the tessellated array of tool

elements. The claimed embodiments achieves such tessellation (which is not taught in the Dunn reference) by the claimed element contacting faces being configured to selectively apply localized pressure to one or more tool elements of the array to adjust the orientation of the tool elements, aligning edges of the tool elements, so as to correct any inter-row or inter-array misalignment, and causing vertices of four adjacent elements to touch one another in the closed position, so that the tool elements of the array tessellate. Dunn, in contrast, does not teach the claimed element contacting faces configured to apply localized pressure on the tool elements to cause the vertices (there are no vertices of the workpieces in Dunn) to touch one another to cause the tool elements of the array to tessellate.

No tessellation is taught or required in Dunn, as the purpose of the disclosed workpiece retainer is to clamp a plurality of tubes (spring coils) for an end machining process, for which no inter-row or inter-array alignment adjustment (as claimed) is needed and no tessellation (as also claimed) is required or, indeed, possible.

In view of the amendments to independent claim 1 and the foregoing remarks, therefore, it is believed that independent claim 1 and its dependent claims are not anticipated by Dunn. Reconsideration and withdrawal of the 35 USC §102(b) rejections are, therefore, respectfully requested.

Claims 1-6 and 10-12 were rejected under §102(b) as being anticipated by Halford. Moreover, claims 7-9 and 14-18 were rejected under 35 USC §103(a) as being unpatentable over Halford in view of Meintrup et al. Reconsideration and withdrawal of these rejections are respectfully requested.

Claim 1 recites:

...wherein the tooling system further comprises at least one bolster means provided to hold the elements of the array securely in the closed ~~position~~

and position, each bolster means having a plurality of element contacting face faces, each element contacting face being configured which is adapted selectively to apply localized pressure to one or more tool elements of the array to adjust an orientation of the tool elements, aligning edges of the tool elements, so as to correct any inter-row or inter-array misalignment, and causing vertices of four adjacent elements to touch one another in the closed position, so that the tool elements of the array tessellate.

Halford teaches, relative to Figs. 8 and 9:

“An alternative array 30 is shown in Figs 8 and 9 in the closed and open positions respectively. Supporting rails 31 to 38 support respective elements 41 to 48, and are driven apart in order to move the elements of the array 30 between the closed and open positions as indicated by arrows B.” These supporting rails are shown below:

FIG. 8

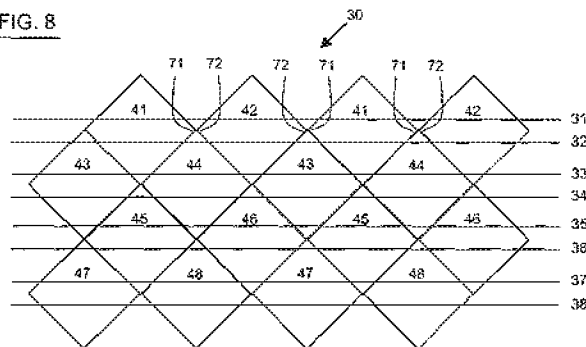
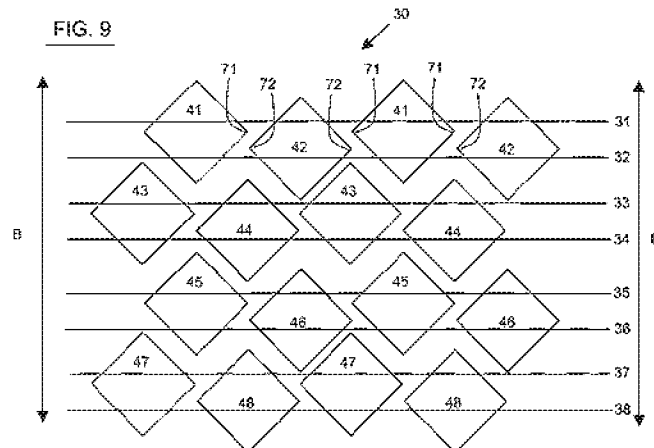


FIG. 9



... and are not disclosed or suggested to include a plurality of element contacting faces, each such element contacting face being configured to selectively apply localized pressure to one

or more tool elements of the array to adjust the orientation of the tool elements, as claimed herein. The supporting rails 31 to 38 are not so configured, as shown in the drawings above. Indeed, the supporting rails 31-38 are rails have an element supporting surface (i.e., one surface that supports the elements):

"An alternative array 30 is shown in Figs 8 and 9 in the closed and open positions respectively. Supporting rails 31 to 38 support respective elements 41 to 48, and are driven apart in order to move the elements of the array 30 between the closed and open positions as indicated by arrows B." Page 9, lines 6-9 of WO 02/064308.

... but is not disclosed (in the written portion of the specification) or shown (in the drawings) to include a plurality of element contacting faces, as claimed herein. Therefore, Halford does not anticipate claim 1 and its dependent claims. Reconsideration and withdrawal of the anticipation rejection are, therefore, respectfully requested.

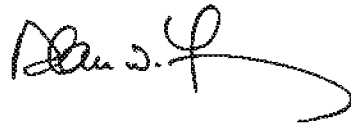
As acknowledged by the Examiner, Halford does not disclose serrated bolster means and sensing means. Note that claim 1 now requires that the claimed bolster means have a plurality of element contacting faces, each being configured to selectively apply localized pressure to one or more tool elements of the array to adjust an orientation of the tool elements, aligning edges of the tool elements, so as to correct any inter-row or inter-array misalignment, and causing vertices of four adjacent elements to touch one another in the closed position, so that the tool elements of the array tessellate, as claimed.

The arguments above regarding Halford are incorporated herein by reference, as if repeated here in full. Meintrup does not teach or suggest any such bolster means having a plurality of element contacting faces, each being configured to selectively apply localized pressure to one or more tool elements, as claimed herein. Neither the wedged shaped control surfaces, gearing or bolster (1, 1', 1''), guide rail 10, cross rail bolster 5 or contact pad have the claimed plurality of

element contacting surfaces, configured as claimed. Therefore, the applied combination cannot be said to teach or to suggest any manner of a tooling system as now claimed. Reconsideration and withdrawal of the 35 USC §103(a) rejections are respectfully requested.

Applicant believes that this application is now in condition for allowance. If any unresolved issues remain, please contact the undersigned attorney of record at the telephone number indicated below and whatever is necessary to resolve such issues will be done at once.

Respectfully submitted,



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By: _____

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